

## WHAT IS CLAIMED IS:

1. A receiver that accepts a high frequency signal containing both a digital broadcasting signal and an analog  
5 broadcasting signal which are associated with one channel and converts the high frequency signal into an intermediate frequency signal, said receiver comprising:

carrier determining means for determining whether a group of carrier signals of said digital broadcasting signal, which  
10 is included in said intermediate frequency signal, satisfies a predetermined requirement so as to generate a requirement satisfaction determination signal indicating a determination result; and

switching means for, when the requirement satisfaction  
15 determination signal delivered thereto from said carrier determination means indicates that the group of carrier signals doesn't satisfy said predetermined requirement while said receiver is receiving the digital broadcasting signal, switching to reception of the analog broadcasting signal, and  
20 for, when the requirement satisfaction determination signal delivered thereto from said carrier determination means indicates that the group of carrier signals satisfies said predetermined requirement while said receiver is receiving the analog broadcasting signal, switching to reception of the  
25 digital broadcasting signal.

2. The receiver according to Claim 1, wherein the digital  
broadcasting signal is an  
orthogonal-frequency-division-multiplexed signal, and said  
30 carrier determining means outputs a requirement satisfaction

determination signal indicating that the group of carrier signals doesn't satisfy said predetermined requirement when a total of electric power of each of the plurality of carrier signals arranged at predetermined intervals of a certain frequency, which is obtained by performing a high-speed Fourier transform on the group of carrier signals of the digital broadcasting signal, is less than a predetermined value.

3. The receiver according to Claim 1, wherein the digital broadcasting signal is an orthogonal-frequency-division-multiplexed signal, and said carrier determining means outputs a requirement satisfaction determination signal indicating that the group of carrier signals doesn't satisfy said predetermined requirement when a difference among amplitudes of the plurality of carrier signals arranged at predetermined intervals of a certain frequency, which is obtained by performing a high-speed Fourier transform on the group of carrier signals of the digital broadcasting signal, is greater than a predetermined value.

20

4. The receiver according to Claim 1, wherein the digital broadcasting signal is an orthogonal-frequency-division-multiplexed signal, and said carrier determining means outputs a requirement satisfaction determination signal indicating that the group of carrier signals doesn't satisfy said predetermined requirement when a group delay characteristic value of each of the plurality of carrier signals arranged at predetermined intervals of a certain frequency, which is obtained by performing a high-speed Fourier transform on the group of carrier signals of the digital

30

broadcasting signal, is greater than a predetermined value.

5. The receiver according to Claim 1, further comprising high frequency signal processing means for selecting said  
5 channel from among a plurality of channels respectively associated with a plurality of high frequency signals, said plurality of channels having different centre frequencies, each of the plurality of high frequency signals containing a digital broadcasting signal and an analog broadcasting signal, and for  
10 generating and outputting the intermediate frequency signal including the digital broadcasting signal and the analog broadcasting signal associated with the selected channel, wherein said carrier determining means delivers a band control signal causing said high frequency signal processing means to  
15 widen a frequency band of the intermediate frequency signal to said high frequency signal processing means when the group of carrier signals satisfies said predetermined requirement, and delivers a band control signal causing said high frequency signal processing means to narrow the frequency band of the  
20 intermediate frequency signal to said high frequency signal processing means otherwise.

6. The receiver according to Claim 5, wherein said carrier determining means delivers a band control signal indicating an  
25 instruction for controlling a resonance Q-value of a tuning circuit included in said high frequency signal processing means to said high frequency signal processing means.

7. The receiver according to Claim 5, wherein said carrier  
30 determining means delivers a band control signal indicating an

instruction for controlling a filtering characteristic of an intermediate frequency filter included in said high frequency signal processing means to said high frequency signal processing means.

5

8. The receiver according to Claim 5, wherein said carrier determining means delivers a band control signal indicating an instruction for changing the frequency band of the intermediate frequency signal so as to enable said carrier determining means to determine whether the group of carrier signals of said digital broadcasting signal satisfies the predetermined requirement.

9. The receiver according to Claim 1, further comprising high frequency signal processing means for selecting said channel from among a plurality of channels respectively associated with a plurality of high frequency signals, said plurality of channels having different centre frequencies, each of the plurality of high frequency signals containing a digital broadcasting signal and an analog broadcasting signal, and for generating and outputting the intermediate frequency signal containing the digital broadcasting signal and the analog broadcasting signal associated with the selected channel, wherein when the group of carrier signals satisfies the predetermined requirement, said carrier determining means generates an attenuation control signal indicating an instruction for attenuating a predetermined band including a centre frequency of the high frequency signal associated with said channel selected by said high frequency signal processing means.

30

10. The receiver according to Claim 9, further comprising intermediate frequency signal determining means for determining whether the intermediate frequency signal delivered thereto from said high frequency signal processing means has an amplitude larger than a predetermined value, and for delivering a connection control signal indicating an instruction for inserting a band stop filter circuit between a tuning circuit and a mixer circuit included in said high frequency signal processing means according to the attenuation control signal delivered thereto from said carrier determining means when determining that the intermediate frequency signal has an amplitude larger than the predetermined value to said high frequency signal processing means.

15

11. The receiver according to Claim 10, wherein when determining that the intermediate frequency signal has an amplitude larger than the predetermined value after delivering the connection control signal to said high frequency signal processing means, or when determining that the intermediate frequency signal has an amplitude larger than the predetermined value and no attenuation control signal is applied thereto from said carrier determining means, said intermediate frequency signal determining means delivers a gain control signal indicating an instruction for reducing a gain for the high frequency signal associated with the selected channel to a high frequency amplifier included in said high frequency signal processing means, said high frequency amplifier amplifying and delivering the high frequency signal to said tuning circuit.

30